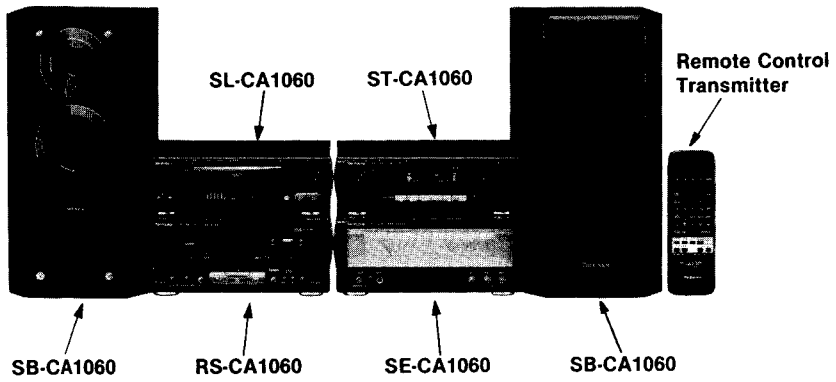
ORDER NO. AD9406171C8

Service Manual

Stereo Amplifier

Amplifier

SE-CA1060



Because of unique interconnecting cables, when a component requires service, send or bring in the entire system.

Colour

(K) ... Black Type

Area

Suffix for Model No.	Area	Colour
(E)	Europe.	(K)
(EB)	Great Britain.	
(EG)	Germany and Italy.	
(GC)	Asia, Latin America, Middle Near East and Africa.	
(GN)	Oceania.	

System: SC-CA1060

■ SPECIFICATIONS

■ POWER AMPLIFIER

Power output	
DIN 1 kHz, THD 1%, both channel driven	2 × 40 W (6 Ω)
Total harmonic distortion	
Rated power at 1 kHz	0.9% (6 Ω)
Half power at 1 kHz	0.009% (6 Ω)
Load impedance	
MAIN	6 – 8 Ω
S/N (rated power)	
MAIN	90 dB
Tone	
BASS	80 Hz (±6 dB)
TREBLE	20 kHz (±6 dB)
V.BASS	60 Hz (0 – 8 dB)

■ General

Power consumption	165 W
Power supply	
[For (E, EG) areas.]	230 V, AC 50/60 Hz
[For (EB, GN) areas.]	230 – 240 V, AC 50/60 Hz
[For (GC) area.]	110/127/220/240 V, AC 50/60 Hz
Dimensions (W × H × D)	280 × 118.5 × 331.5 mm
Weight	
[For (E, EB, EG, GN) areas.]	4.5 kg
[For (GC) area.]	4.7 kg

Notes:

1. Design and specifications are subject to change without notice. Weight and dimensions are approximate.
2. Total harmonic distortions is measured by the digital spectrum analyzer.

System	Stereo Tuner	Compact Disc Player	Stereo Amplifier	Cassette Deck	Speakers
SC-CA1060	ST-CA1060	SL-CA1060	**SE-CA1060**	RS-CA1060	*SB-CA1060

*Made in PAES.

Technics®

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Note: Refer to the placement Installation and Connections and Concerning the remote control and Quick referenc of remote control operation of Service manual for Model No. ST-CA1060 (E, EG), Order No. AD9406153C2.

■ PROTECTION CIRCUITRY

The protection circuitry may have operated if either of the following conditions is noticed:

- No sound is heard when the power is turned on.
- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less than the indicated rated impedance of the amplifier are used.

If this occurs, follow the procedure outlines below:

1. Turn off the power.
2. Determine the cause of the problem and correct it.
3. Turn on the power once again after one minute.

Note:

When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

■ BEFORE REPAIR AND ADJUSTMENT

Disconnect AC power, Discharge both Power Supply Capacitors C701 and C702 through a 10Ω, 5W resistor to ground. DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdrive blade, for instance), as this may distroy solid state devices. After repairs are completed, restore power gradually using a variac, to avoid overcurrent.
Current consumption at 50Hz/60Hz in NO SIGNAL mode should be shown below with respect to supply voltage 230V/240VV/110−127V/220−240V.

Power supply voltage	AC 230V		AC 240V		AC 110−127V		AC 220−240V	
Consumed current 50/60Hz	50Hz	60~180mA	50Hz	50~170mA	50Hz	100~360mA	50Hz	50~180mA
	60Hz	48~144mA	60Hz	40~136mA	60Hz	80~288mA	60Hz	40~144mA

■ LOCATION OF CONTROLS

Stereo amplifier section

① **Power "STANDBY ⏻/ON" switch (POWER, STANDBY ⏻/ON)**
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.

② **Standby indicator (STANDBY)**
When the unit is connected to the AC mains supply, this indicator lights up in standby mode and goes out when the unit is turned on.

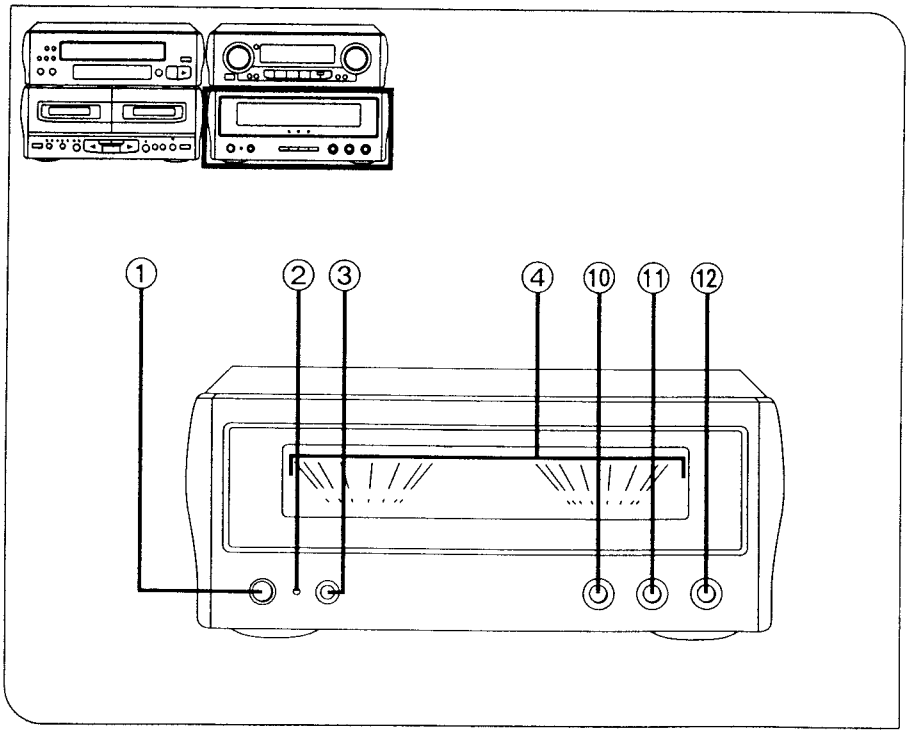
③ **Headphones jack**

④ **Output power meters**

⑩ **S. BASS control**

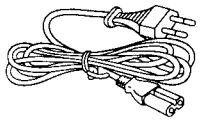
⑪ **BASS control**

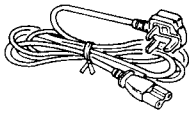
⑫ **TREBLE control**



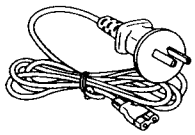
■ ACCESSORIES

AC power supply cord ..... 1 pc.
[RJA0019-2K (E, EG, GC)] [VJA0733 (EB)]

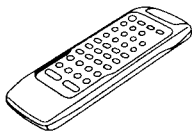




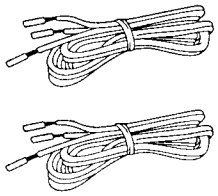
[RJA0036-K (GN)]



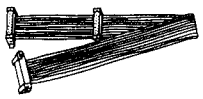
Remote control transmitter ..... 1 pc.
(RAK-CH143WH)



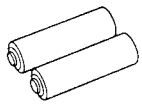
Speaker cords ..... 2 pcs.
(REE0393)



Flat cable (long) ..... 1 pc.
(REX0511)



Batteries for remote control transmitter ..... 2 pcs.
(UM-4, "AAA", R03)

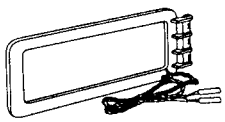


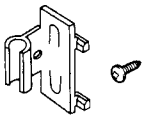
Note: There are available on sale route.

Flat cable (short) ..... 1 pc.
(REX0608)

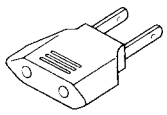
Attachment plug ..... 1 pc.
[SJP9009 (EB)]

AM loop antenna (RSA0012) ..... 1 pc.
• Antenna holder (RMA0244) ..... 1 pc.
• Screw (XTN3+12AFZ) ..... 1 pc.

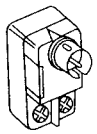




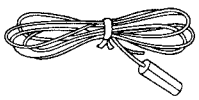
Power plug adaptor ..... 1 pc.
[SJP5213-1 (GC)]



Antenna plug ..... 1 pc.
[RFE0014 (GC, GN)]



FM indoor antenna ..... 1 pc.
(RSA0007)



■ OPERATION CHECKS AND MAIN COMPONENT REPLACEMENT PROCEDURES

NOTE

1. This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.
2. For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.
3. Select items from the following index when checks or replacement are required.
4. Illustrated screws are equivalent to actual size.
5. Refer the parts No. on the page of "Main component Replacement Procedures", if necessary.

• Contents

•Checking Procedure for each P.C.B. page.

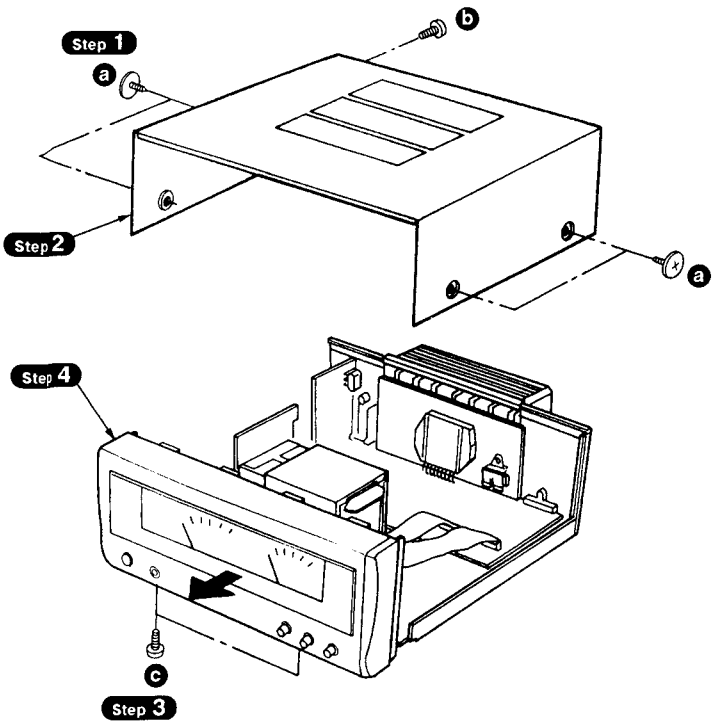
1. Checking for the operation P.C.B. ..... 4.
2. Checking for the main P.C.B. ..... 5.

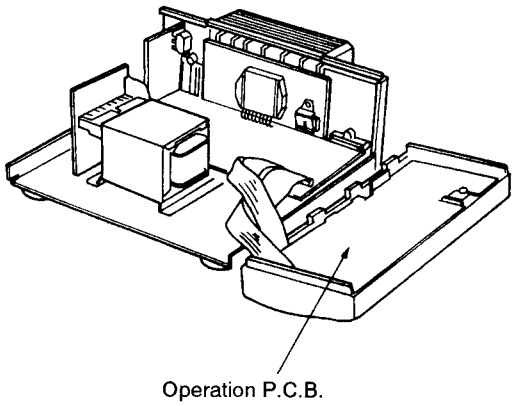
•Main Component Replacement Procedures

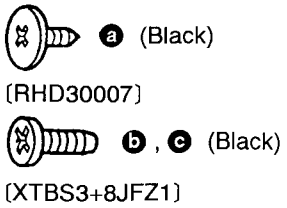
1. Replacement for the power IC and regulator transistor ..... 5.

■ Checking Procedure for each P.C.B.

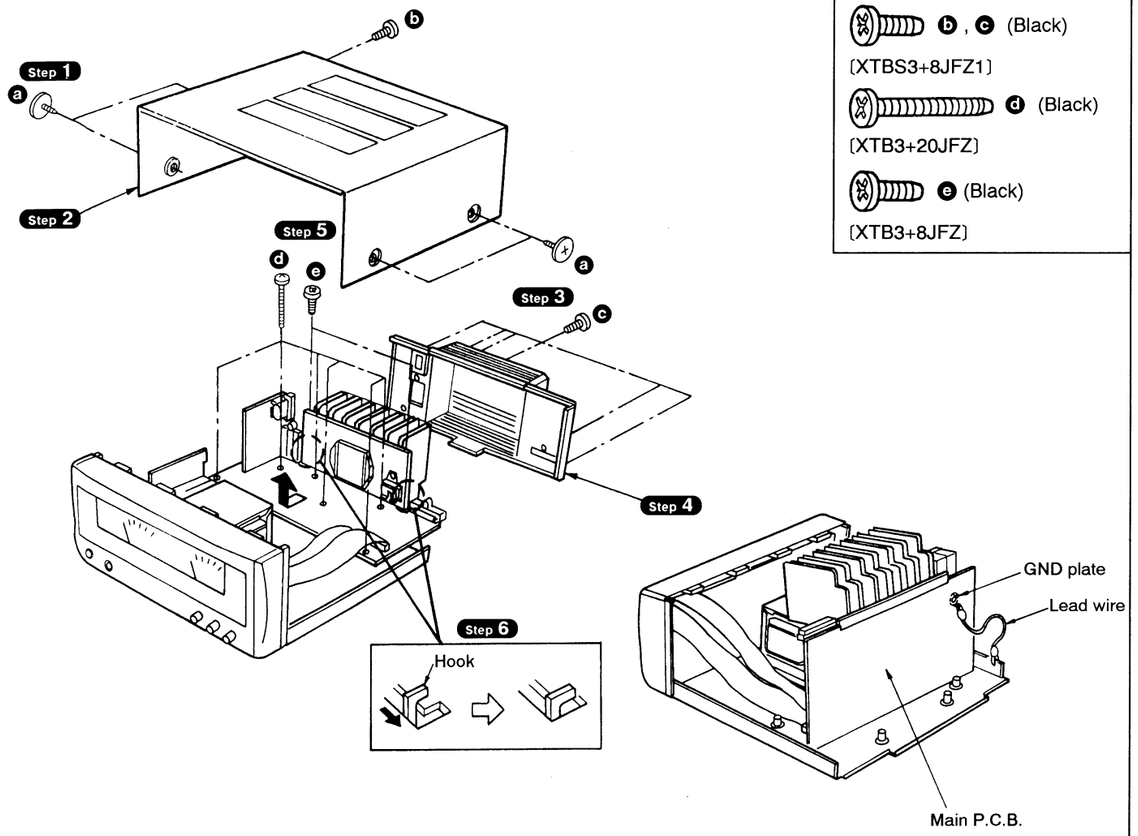
1. Checking for the operation P.C.B.







2. Checking for the main P.C.B.



ⓐ (Black)
[RHD30007]

ⓑ, ⓒ (Black)
[XTBS3+8JFZ1]

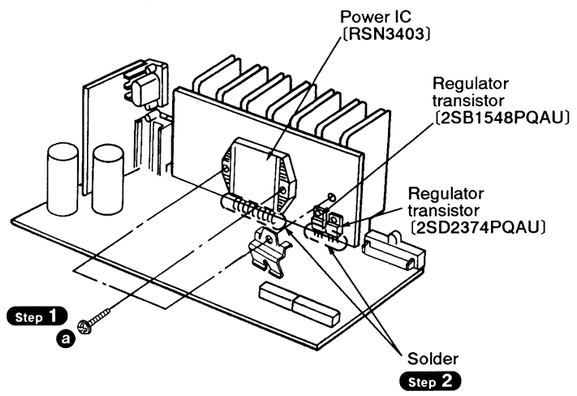
ⓓ (Black)
[XTB3+20JFZ]

ⓔ (Black)
[XTB3+8JFZ]

■ Main Component Replacement Procedures

1. Replacement for the power IC and regulator transistor

•Follow the item 2 in checking procedure for each P.C.B..



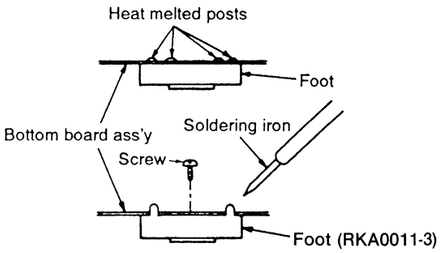
NOTE

When mounting the power IC or regulator transistor, apply silicone compound (RFKX0002) to the rear side of power IC or regulator transistors.

ⓐ
[XTW3+15T]

■ REPLACEMENT OF THE FOOT

1. Remove the 4 heat melted posts on the Bottom board ass'y with a pair of nippers or similar tool.
2. To replace the foot (RKA0011-3) on the Bottom board ass'y melt the 4 posts with a soldering iron or install it with a screw (XTB3+6J).



■ POWER SOURCE ON/OFF OF THIS UNIT SE-CA1060

1. Connect the AC power cord of this unit to an AC outlet and turn it on. (This unit comes to stand-by mode.)
2. Make test point TP701 (TP701) short as shown in Fig. 1. POWER indicator lights and this unit comes to power ON mode.

• Operation Check

1. Set this unit to power ON mode.
2. Input a signal (1 kHz, 100 mV) to the section between the resistor R833 (LINE IN for Lch) and the capacitor (C906) (LINE IN GND) as well as the section between the resistor R834 (LINE IN for Rch) and the capacitor (C906) (LINE IN GND).
3. Connect the speaker to the speaker terminals and check if it sounds from the speaker.

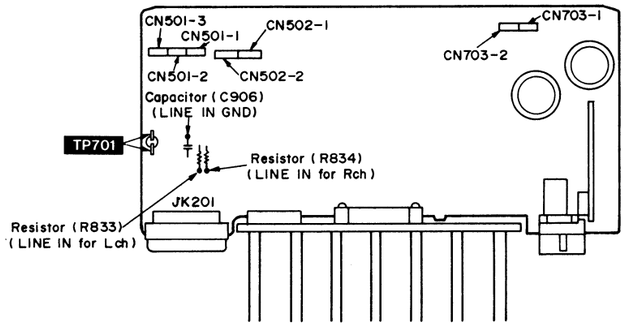


Fig. 1

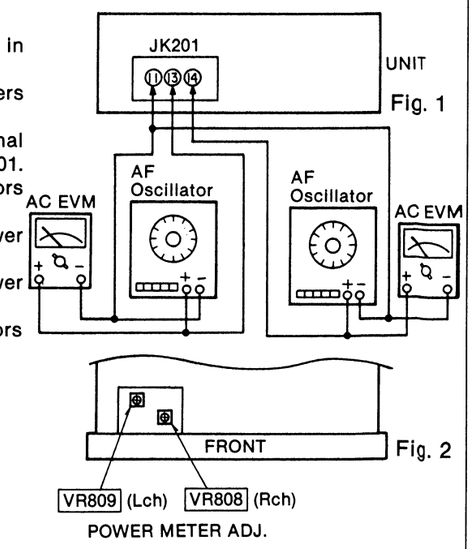
■ MEASUREMENTS AND ADJUSTMENTS

Control positions and equipment used.

- S. BASS knob..... Minimum
- BASS, TREBLE knob..... Center
- AF Oscillator
- AC electronic voltmeter (EVM)

• POWER METER ADJUSTMENT

1. Connect an AF oscillator and AC to the amplifier, as shown in Fig. 1.
2. Set the power meter input level to 0 and confirm the meters on both amplifiers, L-ch and R-ch, show −60dB.
3. Turn on power to the unit and apply a 1kHz, 88mV signal from pin 11 (GND) to pin 13 (R-ch) and pin 14 (L-ch) of JK201. With this input level applied, check the AC EVM monitors are within the range of ±5mV.
4. Adjust **VR808** (R-ch) and **VR809** (L-ch) so that the power meter indicates **1W**.
5. Increase the input level by 10dB and confirm that the power meter indicates **10W (±1W)**.
6. Set the input level back to 0 and check the meter indicators do not return to −60dB too quickly or unevenly.



■ SCHEMATIC DIAGRAM

(Parts list of pages 18, 19, 21, 22.)

(This schematic diagram may be modified at any time with the development of new technology.)

Notes:

- **S801** : Power "STANDBY ⏻ /ON" switch. (POWER, STANDBY ⏻ /ON)
- Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
  No mark: Power ON
- Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety.
  Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

- **Voltage and signal line**
  ▬▬ : Positive voltage line
  ▬ ▬ ▬ : Negative voltage line
  ⋯⋯ : Source signal line

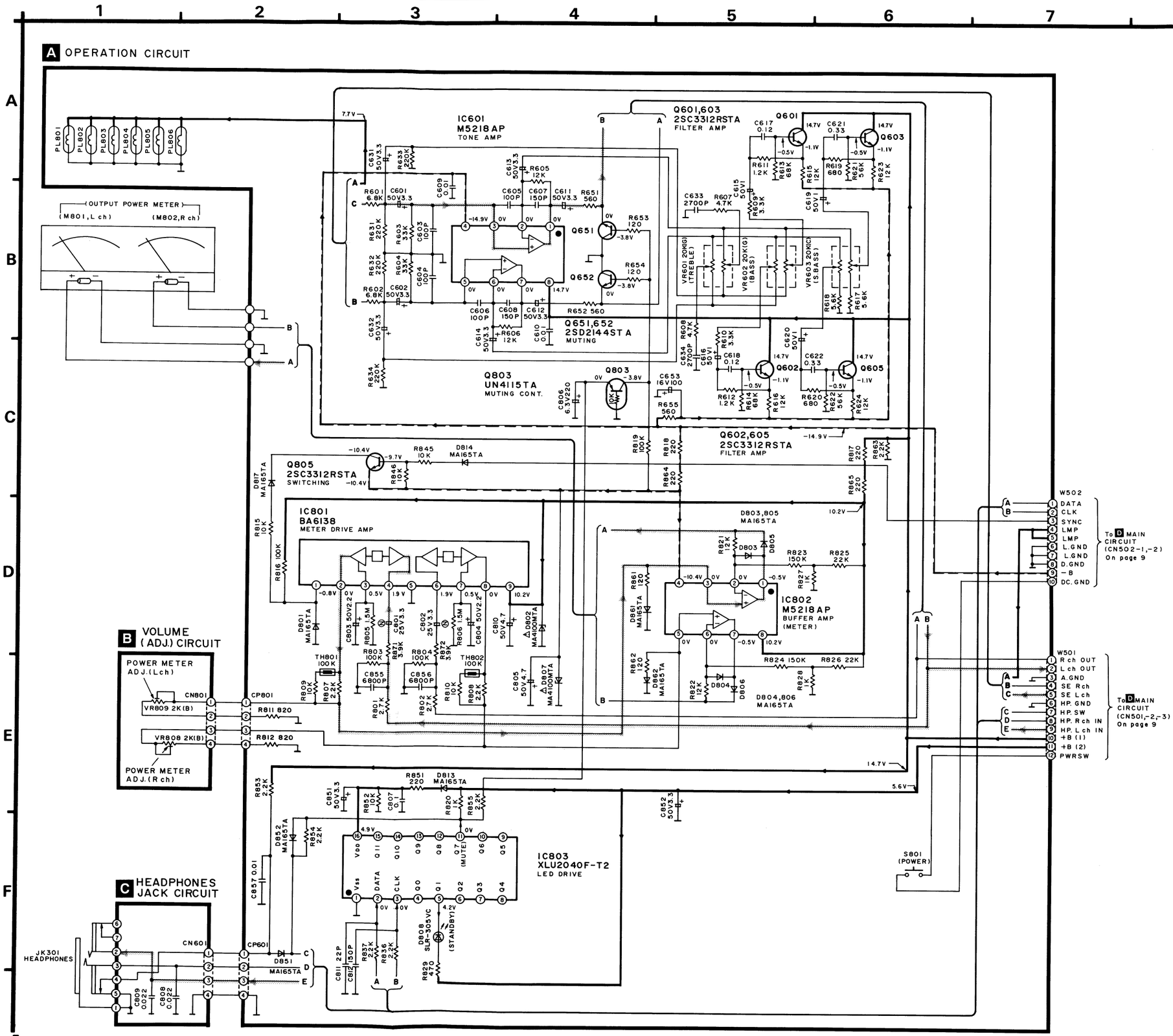
- The supply part number is described alone in the replacement parts.

Part No.	Production Part No.	Supply Part No.
IC803	XLU2040F-T2	XLU2040F-T1

Caution!

IC and LSI are sensitive to static electricity.
Secondary trouble can be prevended by taking care during repair.

- Cover the parts boxes made of plastics with aluminum foil.
- Ground the soldering iron.
- Put a conductive mat on the work table.
- Do not touch the legs of IC or LSI with the fingers directly.



D MAIN CIRCUIT (H.PHONES AMP/POWER AMP/MUTING/REGULATOR/FAN MOTOR DRIVE)

For [GC] area.

JK351 FAN MOTOR

Q371 2SC3311AIRTA MOTOR DRIVE

△Q361 KSD471ACYGTA MOTOR DRIVE

△Q362 2SC3327ABTP MOTOR DRIVE

△Q352 KSD471ACYGTA MOTOR DRIVE

Q351,353 2SC3311AIRTA SIGNAL LEVEL DET.

IC301 M5218AP HEADPHONES AMP

Q203 UN4115TA MUTING CONT.

Q201 2SD1450STA MUTING

Q202 2SD1450STA MUTING

△IC501 RSN3403 POWER AMP

Q573 2SA1309AIQTA OVER LOAD DET.

Q354 2SC3311AIRTA OVER LOAD DET.

Q571,572 2SC3311AIRTA PROTETOR

Q501 2SA992EFTA SWITCHING

△Q702 2SB1548PQAU REGULATOR

△Q701 2SD2374PQAU REGULATOR

△Q703 2SC3940AQSTA REGULATOR

Q704 2SC3112TA RELAY DRIVE

Q753 UN4111TA POWER SUPPLY CONT.

Q751,752,754,755 2SC3940ASTA REGULATOR

D701-704 IN5402BF

D705,706 RLIN4003N02

D751-754 RLIN4003N02

△RL701

SHORT: POWER"ON"

TP701

CN502-1 DATA CLK SYNC LMP LMP CN502-2 L.GND L.GND D.GND -B DC.GND

To A OPERATION CIRCUIT (W502) On page 8

CN501-1 R ch IN L ch IN A.GND SE R ch CN501-2 SE L ch HP.GND HP.SW HP.R ch OUT CN501-3 HP.L ch OUT +B(1) +B(2) PWRSW

To A OPERATION CIRCUIT (W501) On page 8

JK201 AC RLY CT AC T.GND PWRSW A.GND SE R ch SE L ch +B D.GND CLK DATA

To ST-CA1060 :JK602 On page 20

E501 SOURCE SIGNAL (L ch)

CN703-1 CN703-2

W703

△PT701

CN701 CN702 CN703 CN704 CN705 CN706 CN707 CN708

△F701 T1.6A

△F702 T1.6A

CN709 CN710 CN712

CP715

CN715

△F1 T1.25A

△L701

JK701 AC IN

(230V ····· [E,EG] 230-240V ··· [EB,GN] 50/60Hz)

For [E,EB,GN] areas.

For [E,EB,GN] areas.

For [EG] area.

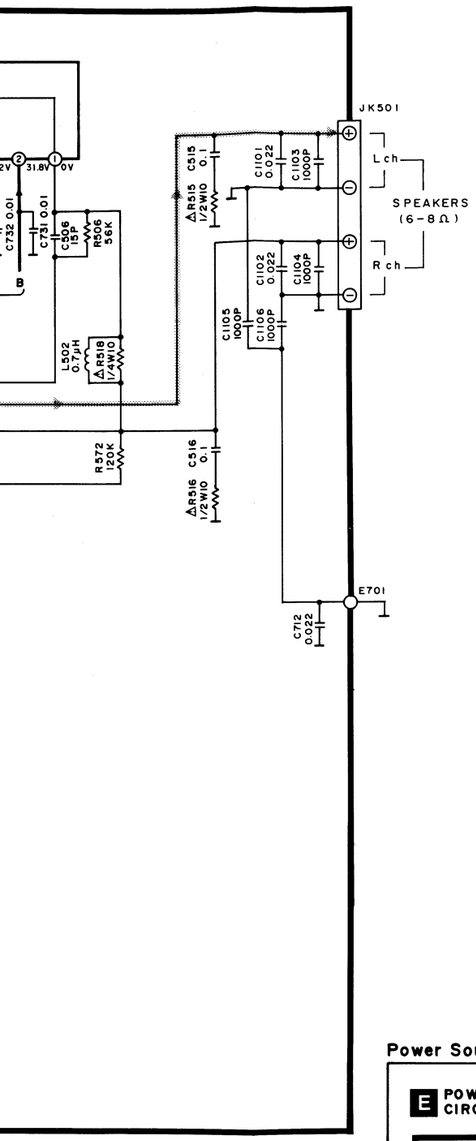
For [E,EG] areas.

For [EB,GN] areas.

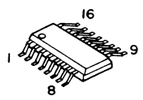
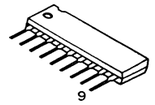
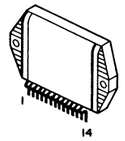
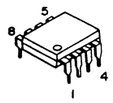
JK501 Lch Rch

E701

17 18 19 20 21 22



• **Terminal guide of IC's, transistors and diodes**

XLU2040F-T2	BA6138	RSN3403	M5218AP
			
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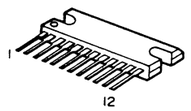
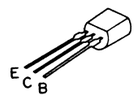
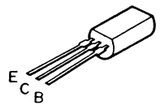
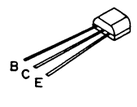
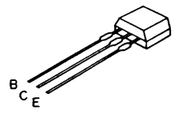
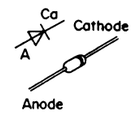
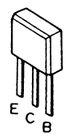
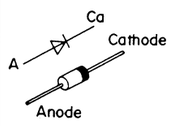
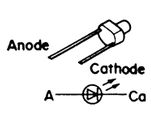
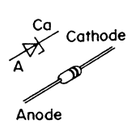
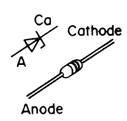
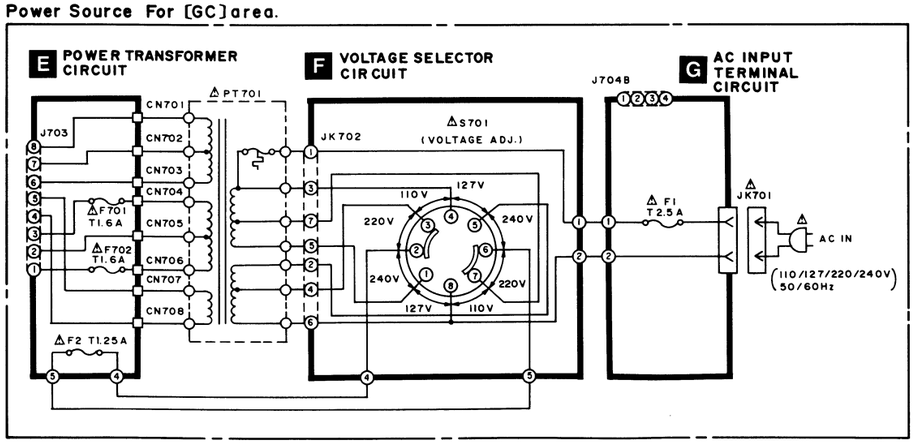
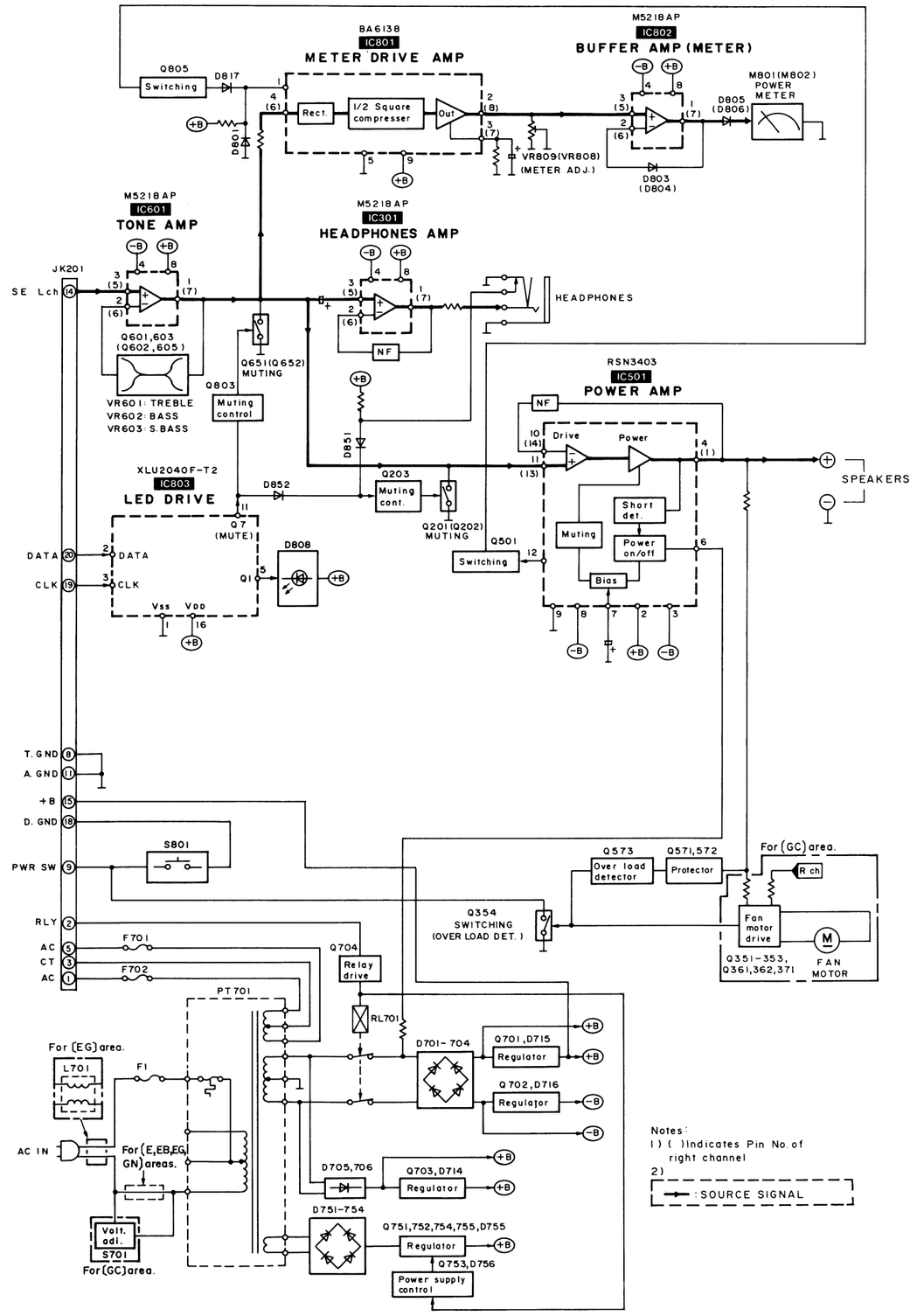
			
2SC3940AQSTA 2SC3940ASTA	2SC3327ABTP	2SD2144STA	MA165TA
			
	UN4111TA UN4115TA 2SA1309AIQTA 2SC3311AIRTA 2SD1450STA	1N5402BF RL1N4003N02	SLR-305VC
			
	MA4100MTA MA4150HTA MA4240MTA		MA4062HTA MA4068MTA MA4082LTA MA4091MTA
			

Power Source For [GC] area.

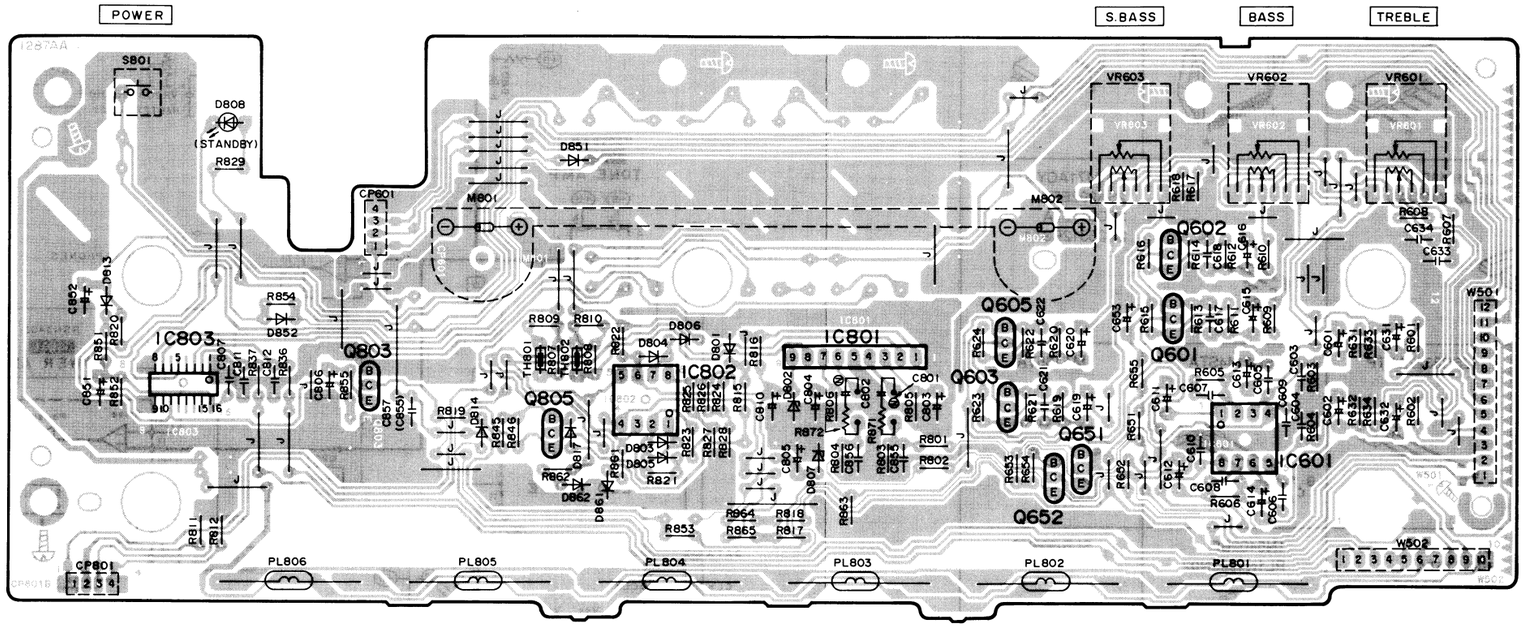


■ BLOCK DIAGRAM

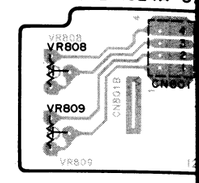


■ PRINTED CIRCUIT BOARDS

A OPERATION P.C.B. (REPI924A-S)

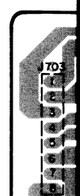


B VOLUME (ADJ.) P.C.B. (REPI924A-S)

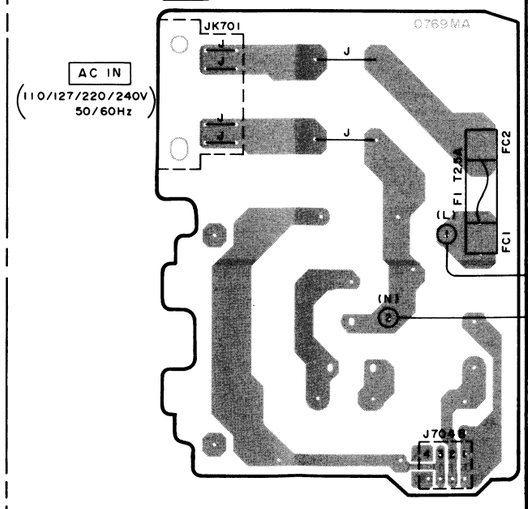


Power Source P.C.B. For (GC) area.

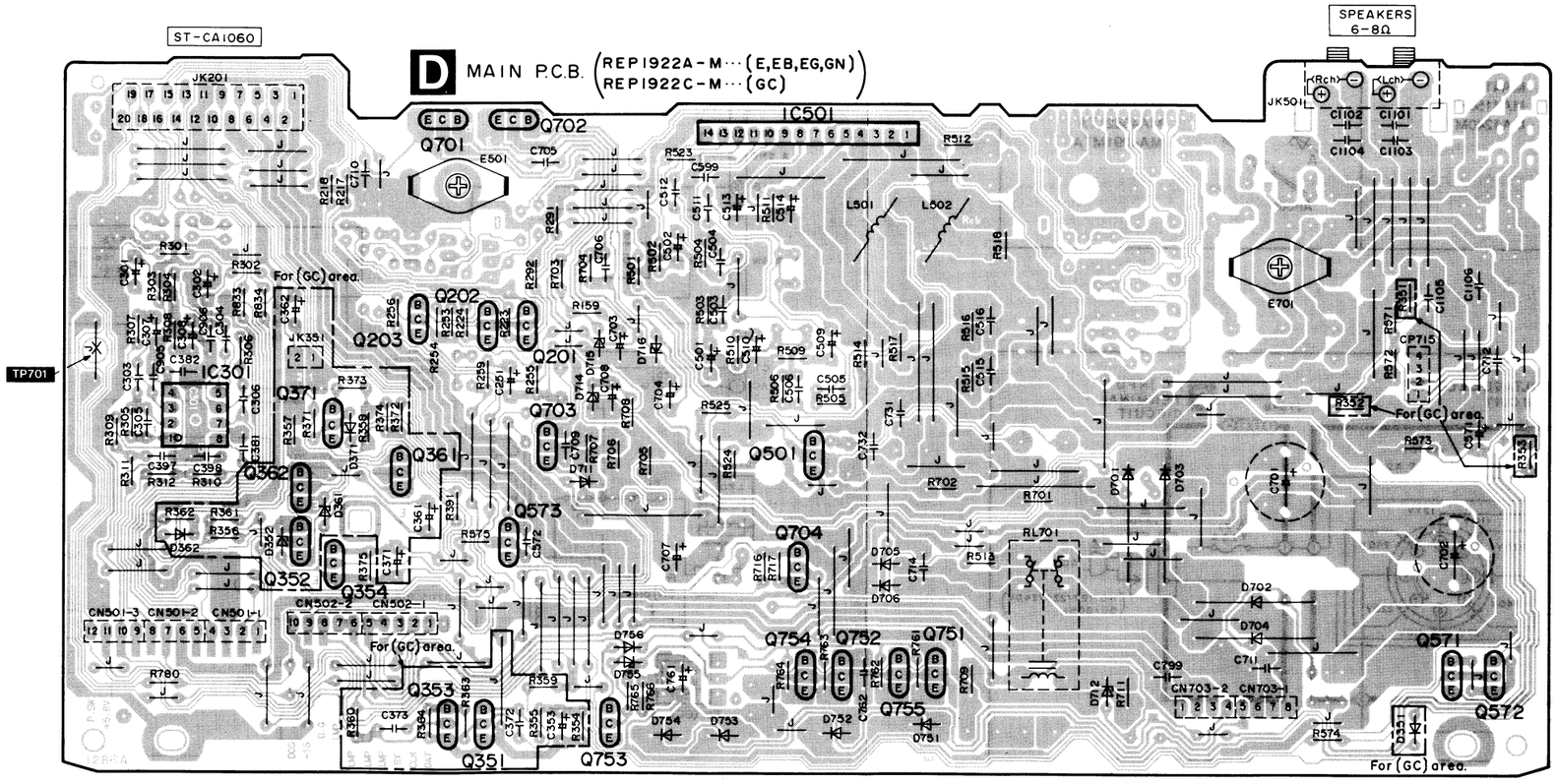
E P



G AC INPUT TERMINAL P.C.B. (REPI923E-P)

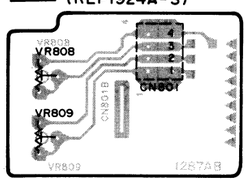


D MAIN P.C.B. (REPI922A-M···(E,EB,EG,GN) REPI922C-M···(GC))

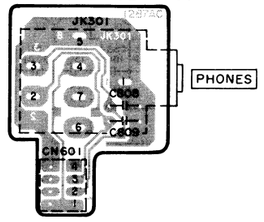

ST-CA1060
SPEAKERS 6-8Ω
JK201
JK501
(Rch)
(Lch)
C1102
C1101
C1104
C1103
IC501
Q702
Q701
E501
L501
L502
E701
TP701
IC301
Q371
Q373
Q361
Q362
Q573
Q352
Q354
Q353
Q355
Q703
Q201
Q202
Q203
Q501
Q704
Q754
Q752
Q751
Q753
Q571
Q572
RL701
D701
D703
D702
D704
D705
D706
D756
D755
D754
D753
D752
D751
D712
D711
D710
C701
C799
C711
C712
C710
C705
C512
C511
C513
C514
C504
C502
C501
C503
C599
C731
C732
C707
C708
C709
C716
C715
C714
C782
C781
C762
C761
C763
C764
C765
C766
C372
C373
C371
C361
C362
C352
C354
C353
C355
C251
C382
C381
C361
C397
C398
C303
C304
C305
C306
C307
C308
C309
C310
C311
C312
C313
C314
C501
C502
C503
C504
C505
C506
C507
C508
C509
C510
C511
C512
C513
C514

10 11 12 13 14 15 16 17 18 19

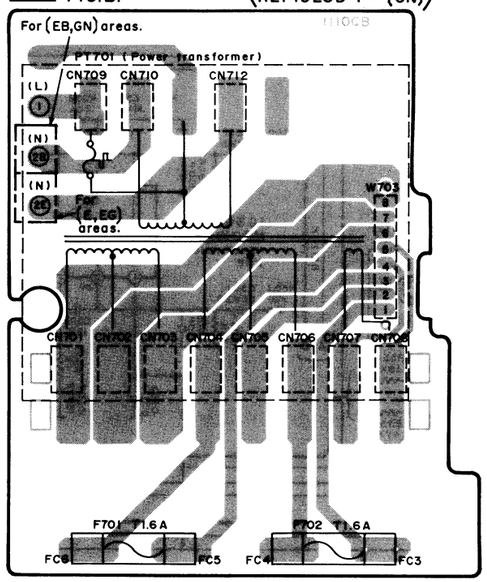
B VOLUME (ADJ.) P.C.B. (REPI924A-S)



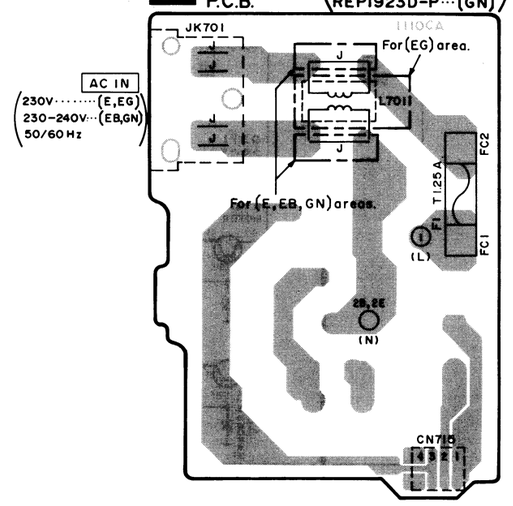
C HEADPHONES JACK P.C.B. (REPI924A-S)



E POWER TRANSFORMER P.C.B. (REPI923A-P···(E), REPI923B-P···(EG), REPI923C-P···(EB), REPI923D-P···(GN))

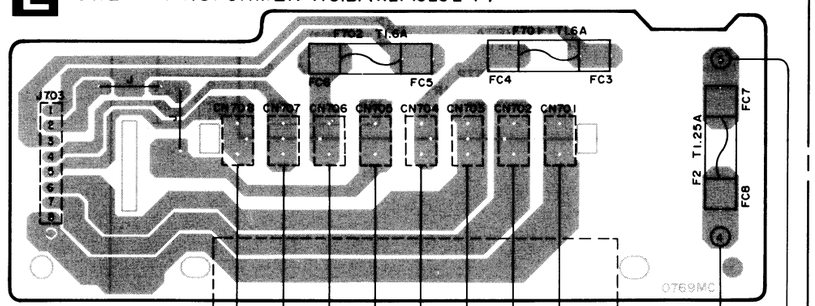


F AC IN TERMINAL P.C.B. (REPI923A-P···(E), REPI923B-P···(EG), REPI923C-P···(EB), REPI923D-P···(GN))

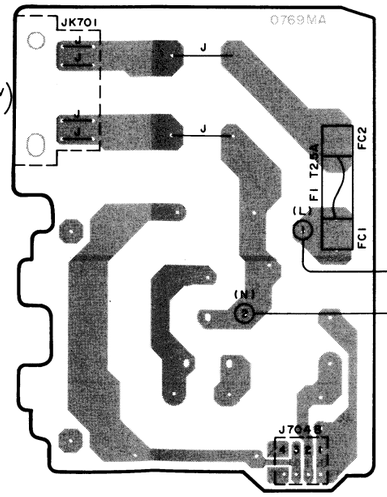


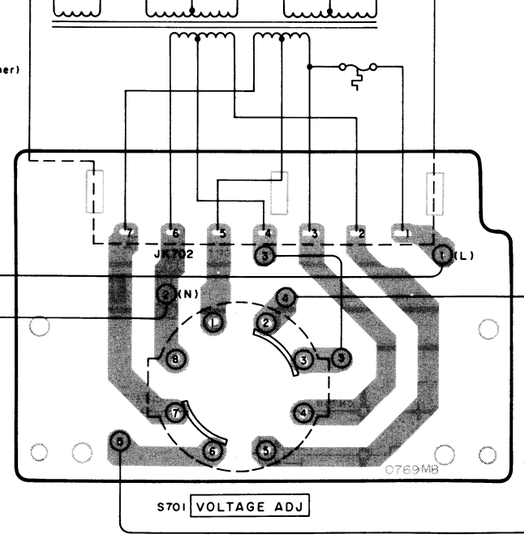
e P.C.B. For (GC) area.

E POWER TRANSFORMER P.C.B. (REPI923E-P)



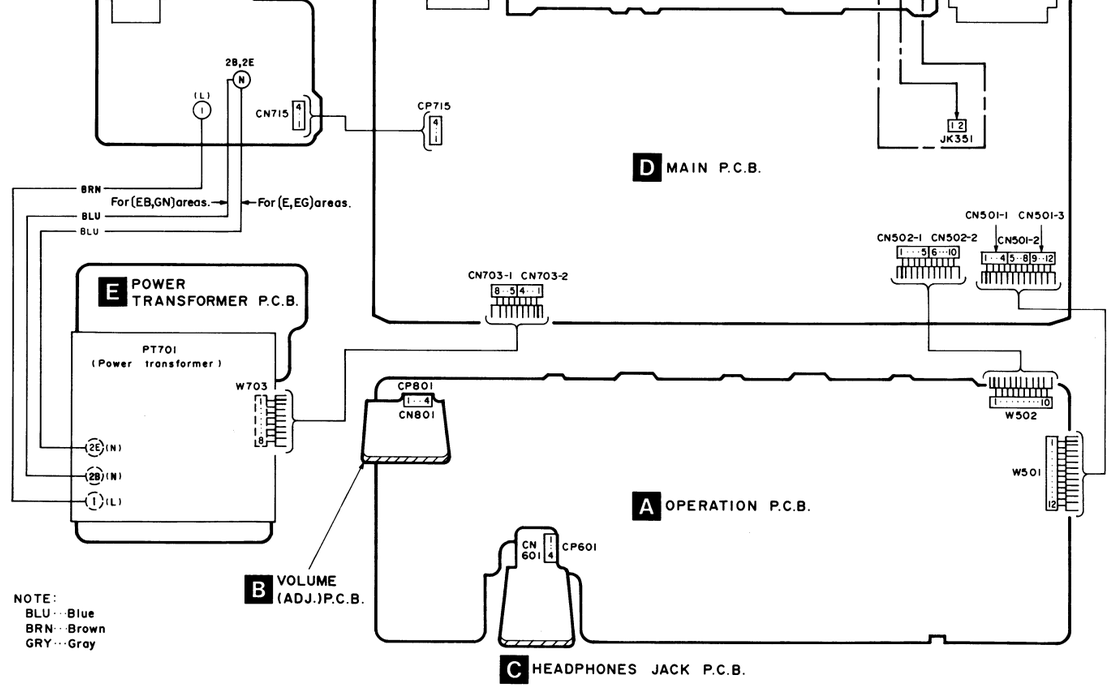
G AC INPUT TERMINAL P.C.B. (REPI923E-P)





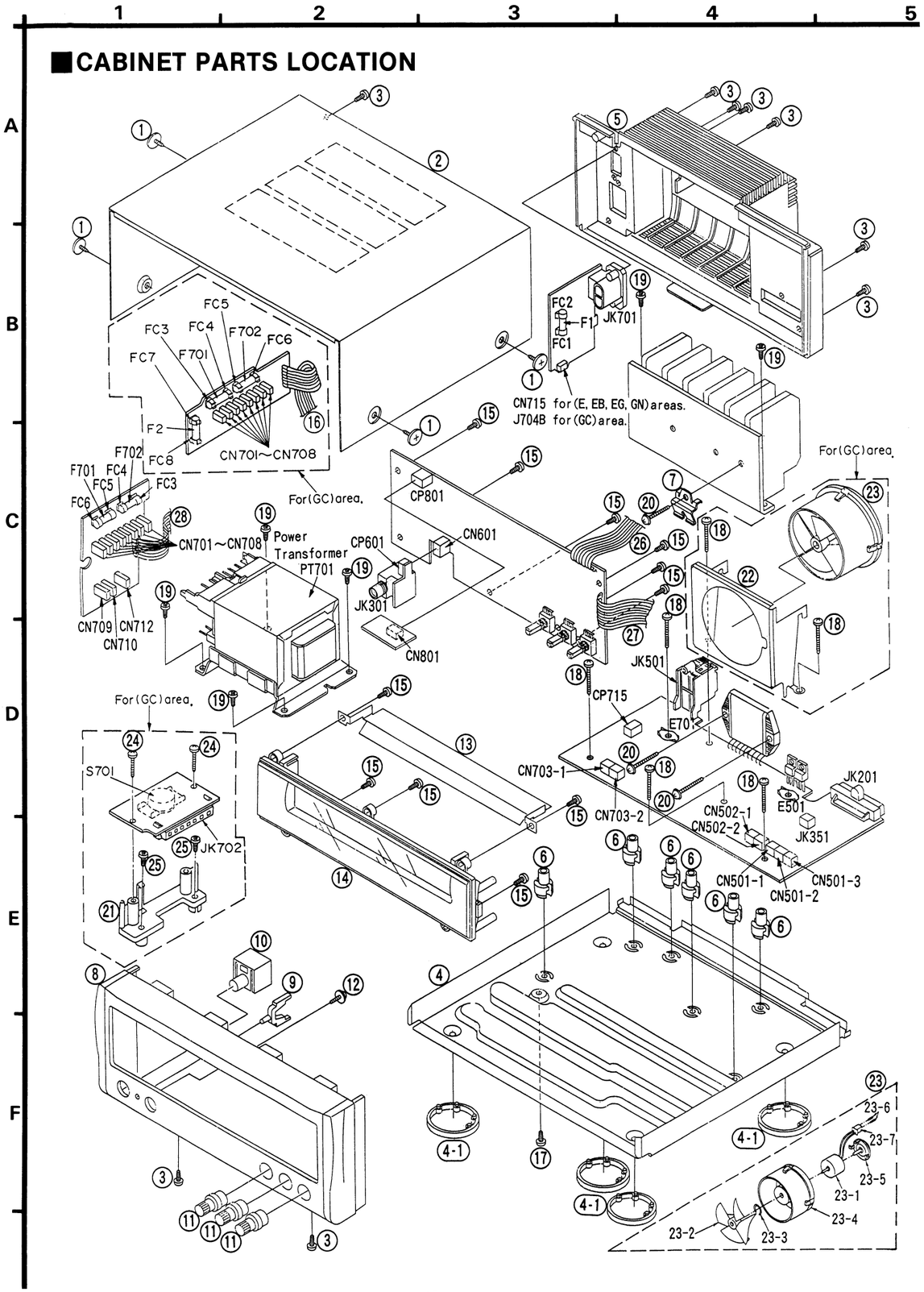
F VOLTAGE SELECTOR P.C.B. (REPI923E-P)

■ WIRING CONNECTION DIAGRAM



NOTE:
BLU···Blue
BRN···Brown
GRY···Gray

■CABINET PARTS LOCATION



■REPLACEMENT PARTS LIST

Notes: *Important safety notice:
Components identified by △ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
*The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)
Parts without these indications can be used for all areas.

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET PARTS LIST	
1	RHD30007	SCREW	
2	RKM0202A-2K	CABINET	
3	XTBS3+8JFZ1	SCREW	
4	RFKJE1060EK	BOTTOM BOARD ASS'Y	(E, EB, EG, GN)
4	RFKJE1060GCK	BOTTOM BOARD ASS'Y	(GC)
4-1	RKA0011-3	FOOT	
5	RKF0376-K	REAR GRILL	(E)
5	RFKHE1060EBK	REAR GRILL ASS'Y	(EB, GN)
5	RFKHE1060EGK	REAR GRILL ASS'Y	(EG)
5	RFKHE1060GCK	REAR GRILL ASS'Y	(GC)
6	RKQ0089	P.C.B. SPACER	
7	RMC0158	TRANSISTOR HOLDER	
8	RFKGECA1060E	FRONT PANEL ASS'Y	
9	RGL0230-Q	READING LIGHT PANEL	
10	RGU1062-S	BUTTON, POWER	
11	RGW0205-S	S. BASS, BASS, TREBLE KNOB	
12	RHD26016	SCREW	
13	RMV0072	CONDUCTION PLATE	
14	RSE0005	METER UNIT	
15	XTBS26+8J	SCREW	
16	RWJ1808110XX	FLAT CABLE (J703) (8P)	(GC)
17	XTB3+10JFZ	SCREW	
18	XTB3+20JFZ	SCREW	
19	XTB3+8JFZ	SCREW	
20	XTW3+15T	SCREW	
21	RMN0190	P.C.B. SPACER	(GC)
22	RMN0282	FAN ANGLE	(GC)
23	SYE1128-2	FAN ASS'Y	(GC)
23-1	MDN-4RB4MRC	MOTOR	(GC)
23-2	SHE232	FAN	(GC)
23-3	SUS271	SPRING	(GC)
23-4	SHE233	FAN CASE	(GC)
23-5	SHE234	CAP	(GC)
23-6	SJT783	TERMINAL	(GC)
23-7	SJS5215	SOCKET (2P)	(GC)
24	XTB3+12JFZ	SCREW	(GC)
25	XTB3+8JFZ	SCREW	(GC)
26	RWJ1810220QC	FLAT CABLE (W502) (10P)	
27	RWJ1812210QC	FLAT CABLE (W501) (12P)	
28	RWJ1808150XX	FLAT CABLE (W703) (8P)	(E, EB, EG, GN)

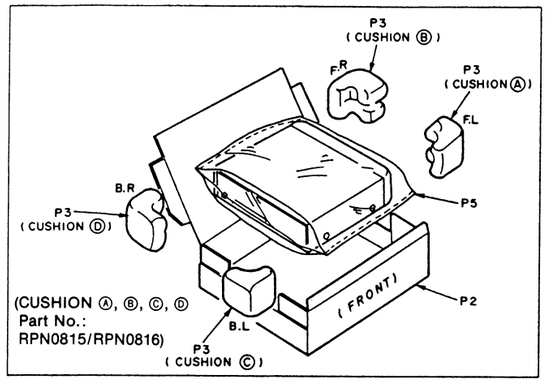
Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT(S)	
IC301	M5218AP	HEADPHONE AMP	
IC501	RSN3403	POWER AMP	⚠
IC601	M5218AP	TONE AMP	
IC801	BA6138	METER DRIVE AMP	
IC802	M5218AP	BUFFER AMP	
IC803	XLU2040F-T1	LED DRIVE	
		TRANSISTOR(S)	
Q201, 202	2SD1450RTA	TRANSISTOR	
Q203	UN4115	TRANSISTOR	
Q351	2SC3311AIRTA	TRANSISTOR	(GC)
Q352	KSD471ACYGTA	TRANSISTOR	(GC)⚠
Q353	2SC3311AIRTA	TRANSISTOR	(GC)
Q354	2SC3311AIRTA	TRANSISTOR	
Q361	KSD471ACYGTA	TRANSISTOR	(GC)⚠
Q362	2SC3327-A	TRANSISTOR	(GC)⚠
Q371	2SC3311AIRTA	TRANSISTOR	(GC)
Q501	2SA992EFTA	TRANSISTOR	
Q571, 572	2SC3311AIRTA	TRANSISTOR	
Q573	2SA1309AIQTA	TRANSISTOR	
Q601-603	2SC3312RSTA	TRANSISTOR	
Q605	2SC3312RSTA	TRANSISTOR	
Q651, 652	2SD2144S	TRANSISTOR	
Q701	2SD2374PQAU	TRANSISTOR	⚠
Q702	2SB1548PQAU	TRANSISTOR	⚠
Q703	2SC3940AQSTA	TRANSISTOR	⚠
Q704	2SC3112TA	TRANSISTOR	
Q751, 752	2SC3940ASTA	TRANSISTOR	⚠
Q753	UN4111	TRANSISTOR	
Q754, 755	2SC3940ASTA	TRANSISTOR	⚠
Q803	UN4115	TRANSISTOR	
Q805	2SC3312RSTA	TRANSISTOR	
		DIODE(S)	
D351	MA165	DIODE	(GC)
D352	MA4068M	DIODE	(GC)⚠
D361	MA4091-M	DIODE	(GC)⚠
D362	MA165	DIODE	(GC)
D371	MA165	DIODE	(GC)
D701-704	1N5402BF	DIODE	⚠
D705, 706	RL1N4003N02	DIODE	⚠
D711	MA165	DIODE	

Ref. No.	Part No.	Part Name & Description	Remarks
D712	MA4240H	DIODE	
D714	MA4062-H	DIODE	⚠
D715, 716	MA4150M	DIODE	⚠
D751-754	RL1N4003N02	DIODE	⚠
D755	MA4082LTA	DIODE	⚠
D756	MA165	DIODE	
D801	MA165	DIODE	
D802	MA4100MTA	DIODE	⚠
D803-806	MA165	DIODE	
D807	MA4100MTA	DIODE	⚠
D808	SLR-305VC	L. E. D.	
D813, 814	MA165	DIODE	
D817	MA165	DIODE	
D851, 852	MA165	DIODE	
D861, 862	MA165	DIODE	
		VARIABLE RESISTOR(S)	
VR601	EVJYV1F03G24	TREBLE	
VR602	EVJYV1F03G24	BASS	
VR603	EVJY91F03C24	S. BASS	
VR808, 809	EVNDXAA00B23	OUTPUT POWER METER	
		THERMISTOR(S)	
TH801, 802	ERTD2ZHL104T	THERMISTOR	
		COIL(S)	
L501, 502	SLQY07G-40	COIL	
L701	RLQ2271M	COIL	(EG) ⚠
		TRANSFORMER(S)	
PT701	RTP2M5B004	POWER TRANSFORMER	(E, EB, EG, GN) ⚠
PT701	RTP2M5G003	POWER TRANSFORMER	(GC) ⚠
		LAMP(S)	
PL801-806	XAMR131	LAMP	
		FUSE(S)	
F1	XBA2C12TB0S	FUSE, 250V T1. 25A	(E, EB, EG, GN) ⚠
F1	XBA2C25TB0	FUSE, 250V T2. 5A	(GC) ⚠
F2	XBA2C12TB0S	FUSE, 250V T1. 25A	(GC) ⚠
F701, 702	XBA2C16TB0	FUSE, 250V T1. 6A	⚠

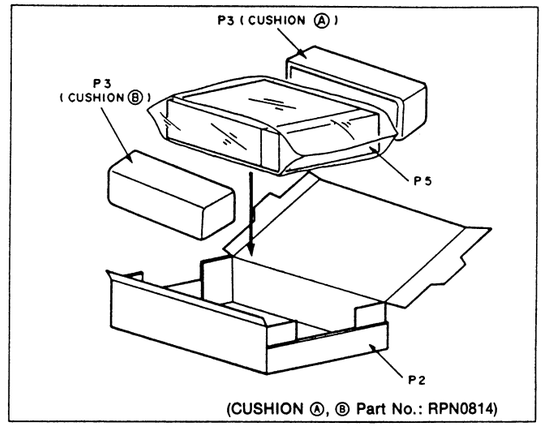
Ref. No.	Part No.	Part Name & Description	Remarks
		SWITCH(ES)	
S701	ESE37263	VOLTAGE ADJ.	(GC) ⚠
S801	EVQ21405R	POWER	
		RELAY(S)	
RL701	RSY0013M-0	RELAY	⚠
		CONNECTOR(S) AND SOCKET(S)	
CN501-1-3	RJS1A6604	CONNECTOR(4P)	
CN502-1, 2	RJS1A6605	CONNECTOR(5P)	
CN601	RJU057W004	SOCKET(4P)	
CN701-708	RJS1A1101T1	SOCKET(1P)	
CN703-1, 2	RJS1A6604	CONNECTOR(4P)	
CN709, 710	RJS1A1101T1	SOCKET(1P)	(E, EB, EG, GN)
CN712	RJS1A1101T1	SOCKET(1P)	(E, EB, EG, GN)
CN715	RJU057W004	SOCKET(4P)	(E, EB, EG, GN)
CN801	RJU057W004	SOCKET(4P)	
CP601	RJT057W004-1	CONNECTOR(4P)	
CP715	RJT057W004-1	CONNECTOR(4P)	
CP801	RJT057W004-1	CONNECTOR(4P)	
J704B	RJU057W004	SOCKET(4P)	(GC)
		JACK(S)	
JK201	RJT065K20	CONNECTOR(20P)	
JK301	RJJ67TA02	HEADPHONES JACK	
JK351	SJT3213	CONNECTOR(2P)	(GC)
JK501	RJR0054	SPEAKER TERMINAL	
JK701	SJS9236	AC INLET	(E, EB, EG, GC) ⚠
JK701	SJSD16	AC INLET	(GN) ⚠
JK702	SJS702-1	CONNECTOR(7P)	(GC)
		EARTH TERMINAL(S)	
E501	SNE1004-2	GND PLATE	
E701	SNE1004-2	GND PLATE	
		FUSE HOLDER(S)	
FC1-6	EYF52BC	FUSE HOLDER	
FC7, 8	EYF52BC	FUSE HOLDER	(GC)

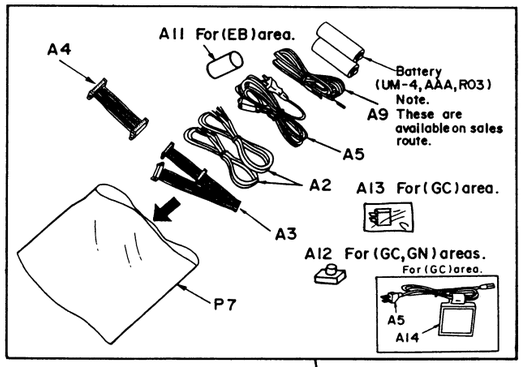
■PACKAGING

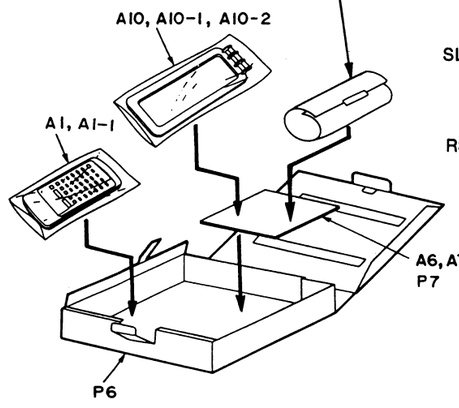
- **ST-CA1060: Stereo Tuner**
  SL-CA1060: Compact Disc Player
  RS-CA1060: Cassette Deck

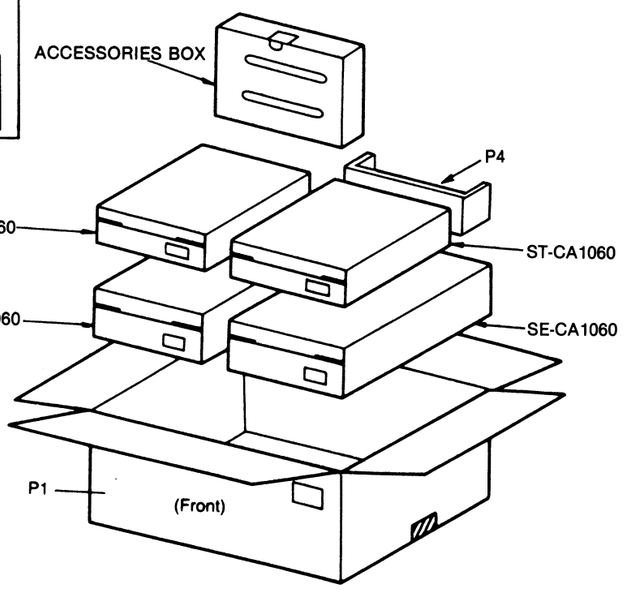


- **SE-CA1060: Stereo Amplifier**









■ RESISTORS AND CAPACITORS

Notes : * Capacity values are in microfarads (uF) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)
* Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM), 1M=1,000k (OHM)

Ref. No.	Part No.	Values & Remarks
		RESISTORS
R159	ERDS2TJ100	1/4W 10
R217, 218	ERDS2TJ102	1/4W 1K
R223, 224	ERDS2TJ472	1/4W 4.7K
R253, 254	ERDS2EJ121	1/4W 120
R255	ERDS2TJ154	1/4W 150K
R256	ERDS2TJ105T	1/4W 1M
R259	ERDS2TJ561	1/4W 560
R291, 292	ERDS2TJ563	1/4W 56K
R301, 302	ERDS2TJ223	1/4W 22K
R303, 304	ERDS2TJ333	1/4W 33K
R305, 306	ERDS2TJ223	1/4W 22K
R307, 308	ERDS2TJ102	1/4W 1K
R309-312	ERDS2EJ121	1/4W 120
R351	ERDS2TJ183T	1/4W 18K (GC)
R352	ERDS2TJ473	1/4W 47K (GC)
R353	ERDS2TJ183T	1/4W 18K (GC)
R354	ERDS2TJ104	1/4W 100K (GC)
R355	ERDS2TJ103	1/4W 10K (GC)
R356	ERDS2TJ332	1/4W 3.3K (GC)
R357	ERDS1FVJ100T	1/2W 10 (GC)⚠
R358	ERDS1FVJ220T	1/2W 22 (GC)⚠
R359	ERDS2TJ273	1/4W 27K (GC)
R360	ERDS2TJ222	1/4W 2.2K (GC)
R361	ERDS2TJ474	1/4W 470K (GC)
R362	ERDS2TJ102	1/4W 1K (GC)
R363, 364	ERDS2TJ472	1/4W 4.7K (GC)
R371, 372	ERDS2TJ273	1/4W 27K (GC)
R373	ERDS2TJ222	1/4W 2.2K (GC)
R374	ERDS2TJ273	1/4W 27K (GC)
R375	ERDS2TJ822	1/4W 8.2K
R391	ERDS2TJ393	1/4W 39K
R501, 502	ERDS2TJ102	1/4W 1K
R503-506	ERDS2TJ563	1/4W 56K
R509, 510	ERDS2TJ182	1/4W 1.8K
R511	ERDS2TJ334	1/4W 330K
R512	ERDS2TJ154	1/4W 150K
R513	ERDS2TJ684	1/4W 680K
R514	ERD25FJ470	1/4W 47 ⚠
R515, 516	ERDS1FVJ100T	1/2W 10 ⚠
R517, 518	ERD25FVJ100T	1/4W 10 ⚠
R523	ERDS2TJ223	1/4W 22K
R524	ERDS2TJ103	1/4W 10K
R525	ERDS2TJ223	1/4W 22K
R571	ERDS2TJ823T	1/4W 82K
R572	ERDS2TJ124T	1/4W 120K
R573	ERDS2TJ563	1/4W 56K
R574	ERDS2TJ564	1/4W 560K
R575	ERDS2TJ223	1/4W 22K
R601, 602	ERDS2TJ682T	1/4W 6.8K
R603, 604	ERDS2TJ333	1/4W 33K
R605, 606	ERDS2TJ123	1/4W 12K
R607, 608	ERDS2TJ472	1/4W 4.7K
R609, 610	ERDS2TJ332	1/4W 3.3K
R611, 612	ERDS2TJ122	1/4W 1.2K
R613, 614	ERDS2TJ683	1/4W 68K
R615, 616	ERDS2TJ123	1/4W 12K
R617, 618	ERDS2TJ562	1/4W 5.6K
R619, 620	ERDS2TJ681	1/4W 680
R621, 622	ERDS2TJ563	1/4W 56K
R623, 624	ERDS2TJ123	1/4W 12K
R631-634	ERDS2TJ224T	1/4W 220K
R651, 652	ERDS2TJ561	1/4W 560
R653, 654	ERDS2EJ121	1/4W 120
R655	ERDS2TJ561	1/4W 560
R701	ERQ16NKW2R2E	1/6W 2.2 ⚠
R702	ERD2FCVJ4R7T	1/4W 4.7 (E, EB, EG, GN)⚠
R702	ERQ16NKW2R2E	1/6W 2.2 (GC)⚠
R703, 704	ERDS2TJ562	1/4W 5.6K
R705, 706	ERG1SJ471E	1W 470 ⚠
R707	ERDS1FVJ820T	1/2W 82 ⚠
R708	ERDS2TJ472	1/4W 4.7K
R709	ERG1SJ391E	1W 390 ⚠
R711	ERG1SJ331E	1W 330 ⚠
R716	ERDS2TJ393	1/4W 39K
R717	ERDS2TJ473	1/4W 47K
R761-764	ERDS2TJ1R0	1/4W 1.0
R765	ERDS2TJ102	1/4W 1K
R766	ERDS2TJ223	1/4W 22K
R780	ERDS2TJ822	1/4W 8.2K
R801, 802	ERDS2TJ272T	1/4W 2.7K
R803, 804	ERDS2TJ104	1/4W 100K
R805, 806	ERDS2TJ155	1/4W 1.5M
R807, 808	ERDS2TJ222	1/4W 2.2K
R809, 810	ERDS2TJ103	1/4W 10K
R811, 812	ERDS2TJ821	1/4W 820
R815	ERDS2TJ103	1/4W 10K
R816	ERDS2TJ104	1/4W 100K
R817, 818	ERDS2TJ221	1/4W 220
R819	ERDS2TJ104	1/4W 100K
R820	ERDS2TJ102	1/4W 1K
R821, 822	ERDS2TJ123	1/4W 12K
R823, 824	ERDS2TJ154	1/4W 150K
R825, 826	ERDS2TJ223	1/4W 22K
R827, 828	ERDS2TJ102	1/4W 1K
R829	ERDS2TJ471	1/4W 470
R833, 834	ERDS2TJ471	1/4W 470
R836, 837	ERDS2TJ222	1/4W 2.2K
R845, 846	ERDS2TJ103	1/4W 10K
R851	ERDS2TJ221	1/4W 220
R852	ERDS2TJ103	1/4W 10K
R853-855	ERDS2TJ222	1/4W 2.2K
R861, 862	ERDS2EJ121	1/4W 120
R863	ERDS2TJ222	1/4W 2.2K
R864, 865	ERDS2TJ221	1/4W 220
R871, 872	ERDS2TJ392T	1/4W 3.9K
		CAPACITORS
C251	ECEA0JKA221B	6.3V 220U
C301, 302	ECEA1HKA3R3B	50V 3.3U
C303, 304	ECBT1H150J5	50V 15P
C305, 306	ECBT1H330J5	50V 33P
C307, 308	ECEA1CKA220B	16V 22U
C353	ECEA1HKA2R2B	50V 2.2U (GC)
C361	ECEA1CKA101B	16V 100U (GC)
C362	ECEA1CKA100B	16V 10U (GC)
C371	RCE0JKA221BV	6.3V 220U (GC)
C372	ECBT1E223ZF	25V 0.022U (GC)
C373	ECBT1H104ZF5	50V 0.1U (GC)
C381, 382	ECBT1E103ZF	25V 0.01U
C397, 398	ECBT1E103ZF	25V 0.01U
C501, 502	ECA1HAP3R3B	50V 3.3U
C503, 504	ECBT1H151KB5	50V 150P
C505, 506	ECBT1H150J5	50V 15P
C509, 510	ECA1HAP220B	50V 22U
C511, 512	ECBT1H821KB5	50V 820P
C513	ECA1HM470B	50V 47U
C514	ECA2AAP100B	100V 10U
C515, 516	ECBT1H104ZF5	50V 0.1U
C571	ECEA0JKA101B	6.3V 100U
C572	ECBT1E223ZF	25V 0.022U
C599	ECBT1C103MS5	16V 0.01U
C601, 602	ECEA1HKA3R3B	50V 3.3U
C603-606	ECBT1H101KB5	50V 100U
C607, 608	ECBT1H151KB5	50V 150U
C609, 610	ECBT1E103ZF	25V 0.01U
C611-614	ECEA1HKA3R3B	50V 3.3U
C615, 616	ECEA1HKA010B	50V 1U
C617, 618	ECQV1H124JM3	50V 0.12U
C619, 620	ECEA1HKA010B	50V 1U
C621, 622	ECQV1H334JM3	50V 0.33U
C631, 632	ECEA1HKA3R3B	50V 3.3U
C633, 634	ECQB1H272JF3	50V 2700U

Ref. No.	Part No.	Values & Remarks
C653	ECEA1CKA101B	16V 100U
C701, 702	ECES1H682VNG	50V 6800U ⚠
C703, 704	ECEA1CKA330B	16V 33U
C705, 706	ECBT1H104ZF5	50V 0.1U
C707	ECA1HM471B	50V 470U ⚠
C708	ECEA1CKA100B	16V 10U
C709, 710	ECBT1E103ZF	25V 0.01U
C711	ECQE1104KF3	100V 0.1U
C712	ECBT1E223ZF	25V 0.022U
C714	ECKR1H103ZF5	50V 0.01U

Ref. No.	Part No.	Values & Remarks
C731, 732	ECKR1H103ZF5	50V 0.01U
C761	ECA1EM102B	25V 1000U ⚠
C762	ECBT1E103ZF	25V 0.01U
C799	ECBT1H104ZF5	50V 0.1U
C801, 802	ECEA1EKN3R3B	25V 3.3U
C803, 804	ECEA1HKA2R2B	50V 2.2U
C805	ECEA1HKA4R7B	50V 4.7U
C806	ECEA0JKA221B	6.3V 220U
C807	ECBT1H104ZF5	50V 0.1U
C808, 809	ECBT1E223ZF	25V 0.022U

Ref. No.	Part No.	Values & Remarks
C810	ECEA1HKA4R7B	50V 4.7U
C811	ECBT1H220J5	50V 22P
C812	ECBT1H151KB5	50V 150P
C851, 852	ECEA1HKA3R3B	50V 3.3U
C855, 856	ECBT1C682KR5	16V 6800P
C857	ECBT1E103ZF	25V 0.01U
C905, 906	ECBT1H101KB5	50V 100P
C1101, 1102	ECBT1E223ZF	25V 0.022U
C1103-1106	ECBT1H102KB5	50V 1000P

■ REPLACEMENT PARTS LIST

Notes: *Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
*The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)
Parts without these indications can be used for all areas.
*Remote Control Ass'y: Supply period for three years from termination of production.
*The "(SF)" mark denotes the standard part.

Ref. No.	Part No.	Part Name & Description	Remarks
		PACKING MATERIALS	
P1	RPG2129-1	PACKING CASE (SYSTEM)	(E, EG)
P1	RPG2131	PACKING CASE (SYSTEM)	(EB)
P1	RPG2132	PACKING CASE (SYSTEM)	(GC)
P1	RPG2133	PACKING CASE (SYSTEM)	(GN)
P2	RPG2230	PACKING CASE (AMPLIFIER)	
P2	RPG2231	PACKING CASE (DECK)	
P2	RPG2232	PACKING CASE (TUNER/CD)	
P3	RPNO814	CUSHION (AMPLIFIER)	
P3	RPNO815	CUSHION (DECK)	
P3	RPNO816	CUSHION (TUNER/CD)	
P4	RPQ0458	SPACER	
P5	SPP740	PROTECTION BAG (UNIT)	
P6	RPQF0047	ACCESSORIES BOX	
P7	XZB25X34C03Y	PROTECTION BAG (F.B., ACC.)	
		ACCESSORIES	
A1	RAK-CH143WH	REMOTE CONTROL TRANSMITTER	
A1-1	RKK0057-K	BATTERY COVER	

Ref. No.	Part No.	Part Name & Description	Remarks
A2	REE0393	SPEAKER CORD	
A3	REX0511	FLAT CABLE (LONG) (15P)	
A4	REX0608	FLAT CABLE (SHORT) (20P)	
A5	RJA0019-2A	AC POWER SUPPLY CORD	(E, EG, GC) ⚠
A5	VJA0733	AC POWER SUPPLY CORD	(EB) ⚠ (SF)
A5	RJA0036-K	AC POWER SUPPLY CORD	(GN) ⚠ (SF)
A6	RFKSECA1060E	INSTRUCTION MANUAL ASS'Y	(E)
A6	RFKSCA1060EB	INSTRUCTION MANUAL ASS'Y	(EB)
A6	RQT2552-B	INSTRUCTION MANUAL	(GN)
A6	RQT2554-2E	INSTRUCTION MANUAL	(EG)
A6	RQT2553-2G	INSTRUCTION MANUAL	(GC)
A7	RQA0013	WARRANTY CARD	(E, EB, EG)
A7	RQX7433ZA	WARRANTY CARD	(GN)
A8	RQCB0169	SERVICENTER LIST	
A9	RSA0007	FM INDOOR ANTENNA	
A10	RSA0012	AM LOOP ANTENNA	
A10-1	RMN0244	ANTENNA HOLDER	
A10-2	XTN3+12AFZ	SCREW	
A11	SJP9009	ATTACHMENT PLUG	(EB) ⚠
A12	RFE0014	ANTENNA PLUG	(GC, GN)
A13	SJP5213-1	POWER PLUG ADAPTOR	(GC) ⚠
A14	RQLA0134	VOLTAGE CUATION LABEL	(GC)

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